PRIME DETERMINANTS OF PROFITABILITY IN INDIAN BANKS - EMERGING ISSUES AND FUTURE OUTLOOK

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ABSTRACT

Profitability is an important criterion to evaluate the overall efficiency of a bank group. The present paper examines the comparative trends in profitability behaviour of five major bank groups in the post liberalization and globalization era. The paper further examines the factors which are affecting the profitability of these bank groups. The paper concludes that average profitability is the highest in case of New Private Sector Banks and in Foreign Banks. The selected factors have differently affected the profitability of these bank groups. With the help of Correlation Co-efficient Matrix and R - Square, this paper examines the impact of each selected variable on the profitability of each group.
The paper offers suggestions on the basis of empirical results to increase the profitability and measures to be taken to increase the level of spread and to curtail the burden.

Keywords: Prime Determinants, Emerging Issues and Future Agenda

INTRODUCTION

With the globalization trends world over, it is difficult for any nation, big or small, developed or developing, to remain isolated from what is happening around. For a country like India, which is one of the most promising emerging markets, such isolation is nearly impossible. More particularly, in the time of these dynamic changes, India has also adopted liberalization, privatization and globalization policies under banking sector reforms in 1991, which has improved the performance of the banks to a large extent.

Due to these changes, the concept of banking has drastically changed from a business dealing with money transactions alone to a business related to information on financial transactions. It is so because with the entry of foreign and new private sector banks, competition

has increased and banking business has become vast to the extent that even education fee, bills payment, reservations and more particularly, security market and many non-banking transactions etc. are made through banks. It has become possible just because of the use of latest techniques of information technology under the liberalized policies.

Due to liberalization and globalization, competition has increased. Along with the new products, quality of services has also improved. Liberalization and globalization, on the one hand increase competition; on the other hand they have opened new vistas of business for Indian banks in the global markets. Their gain is directly proportional to their efficiency. So, Indian banks now should explore these opportunities in a big way to gain momentum in the global markets.

Liberalization as well as globalization has changed the ways of banking business and the banks are facing fierce competition to stay in foreign markets. They are facing a number of challenges to improve their performance on one hand, and to serve the customers in new ways with greater efficiency and effectiveness on the other hand. Now a days, profitability and social objectives are the two opposing considerations which a bank is required to keep in mind. Although, profits today are no longer the be-all and end-all of banking business, any concern for healthy growth, long-term viability and lasting contribution of banks must accord due emphasis to profitability.

Profitability is an important criterion for determining the efficiency of banks. This has to be considered in relation to the growth of various selected variables. Raising profitability is one of the important ways by which a bank can vigorously expand its operations on a sustained long-term basis. Profit is the very reason for the continued existence of every commercial organization. The rate of profitability, therefore, is rightfully considered as indicator of efficiency in the deployment of resources of banks.

The present paper is mainly concerned with the analysis of profitability and its prime determinants of Indian commercial banks in the post liberalized and globalized era. Indian banking has witnessed a sea change in recent years, reflecting the onset of deregulation, liberalization, privatization and globalization. The financial sector reforms focused on reforms in ownership and control, to increase competition in regulation and the policy environment. These sharp changes in the policy environment concerning the operations of the banking system have direct and indirect implications for the performance of the banking sector. All these policy changes have great impact on banks' performance and lead them to face high competition to retain their share in the market.

In the recent days, Indian banking system has become quite complex and varied. Banks have evolved into a technology for delivering a wide range of financial services. The activities of banks have encompassed advisory and counseling roles as well as a monitoring function with a distinct discipline base coupled with entry in non-banking and fee-based activities. Due to the increasing expectations and demands of customers, now commercial banks are facing number of challenges to serve the customers efficiently and effectively.

Today, Indian banking is facing a challenge to improve its profitability on one the hand and to serve the customers efficiently in innovative ways, on the other hand. Hence, the degree of profitability has great pressure to improve in the current era of globalization. No doubt, the performance of the banks has been improved but profitability of number of banks in all bank groups is deteriorating at regular pace. Therefore, there is a need to concentrate more on efforts to analyze the working of all commercial banks so that appropriate and timely strategies can be developed to improve the profitability of poor performing banks.

The paper is mainly concerned with Indian commercial banks and the profitability is examined at bank level and bank group level from 1998-99 to 2005-06. The profitability of Indian commercial banks is analyzed along with the study of impact of selected factors on the profitability.

ORGANIZATION OF PAPER

The whole paper is divided into four parts. After a brief introduction of the theme, it reviews the related studies and describes the methodology. The third part analyzes the results whereas last part concludes the paper with some policy recommendations.

II

REVIEW OF LITERATURE

Various studies have been conducted to analyse the profitability of the banks at different levels *Arora & Verma (2005)* have observed in their study that the Indian Banking System is becoming increasingly mature in the areas of transformation of business process and the appetite for risk management.

Bhattacharya, (1997) has found *PSBs* with the highest efficiency among the three categories of bank groups as foreign and private sector banks have much lower efficiencies. However PSBs started showing a decline in efficiency after 1987; private banks witnessed no change and foreign banks disclosed sharp rise in efficiency.

Das (1999) has observed concluded that while there is a welcome increase in emphasis on non- interest income, banks have tended to show risk-averse behavior by opting for risk- free investments over risky loans.

Das M R (2003) has noted that during 2000-01, *Corporation Bank* emerged as the topmost bank followed by *Andhra Bank* and OBC whereas in business performance. During 2000-01, the listed banks ranked higher than the unlisted ones.

Garg, Mohini (1994) studied that Indian scheduled commercial banks have achieved remarkable progress in last two decades under study, particularly in branch expansion in rural areas, deposit mobilization and credit deployment to priority sector and small borrowers but their profits have not kept pace with their growth, and hence, their share in profits have come down, whereas foreign banks with a much smaller geographical spread and resource base, earn almost as much by way of profits as the 20 nationalized banks put together. There is a lot of difference in the pattern of advances and investments and even lending rates between Indian and foreign banks.

Johri & Jauhari, (1994) also analyzed whether banks use e-commerce and other IT systems to reinvent themselves, gain access to new markets or become extinct as dinosaurs; whether advances in technology create new opportunities for banks, or they become extinct. *Kaveri, (2001)* has presented some evidence to indicate that no bank can become weak or potentially weak all of a sudden. There is a gradual deterioration in the position of loan default and profitability.

Murty, (1996) examined the impact of monetary policy and market interest rates on the bank profitability and also suggested various measures to improve the profitability of the public sector banks in India.

Nayar, Anita (1992) concluded that overall profitability of banks has been under constant strains during the study period except 1970-74 and downfall was experienced between1970-1974.

Roger, (2000) said that business is being completely reinvented because transaction costs are much lower on the Internet than in traditional channels. The banks are rapidly shifting their business functions and customers relationships on to the Web.

Sarker and Das, (1997) find PSBs comparing poorly with the other two categories. However, they caution that no firm inference can be derived from a comparison done for a single year.

Satyamurty, (1994) clarified the concepts of profits, profitability & productivity applicable to the banking industry. He concluded that the pressure on the profitability is more due to the factors beyond their control.

Shah, (1977) examined that slow growth in productivity and efficiency, wasteful work of banks that higher profitability can result from increased spread and that innovations have a limited role. He favored written job descriptions foi improvement of staff productivity. He also emphasized reduction of costs, creation of a team spirit improvement in the management for improving bank profitability and productivity.

Singh, Inderjeet & Parmod Kumar (2006) analyzed that deposits is a major determinant of spread followed by borrowings and labour. The study again concluded that average technical and allocative efficiency are the highest in foreign banks; while of PSBs is lower than FBs but much better than private sector banks.

Singla & Arora (2005) studied the comparative performance of Canara Bank and Indian Bank concluding that both the banks have improved their financial performance during the study period where *Canara Bank* has an upper hand in growth of deposit, advances and average working funds. In case of productivity, it is rising in both the banks but remained much higher in *Canara Bank.*

Swamy, (2001) concludes that in many respects *NPSBs* are much better than *PSBs*; they are even better than foreign sector banks.

T. Padamasai (2000) pointed out that productivity and profitability of five big banks increased throughout the post-reforms period in terms of selected ratios of each parameter; but on account of efficiency, the performance of the top five banks is very dismal as inefficiency has increased during the study period. He suggested that if the government sells its share in the profit making banks, it would be able to bail out the weak banks.

There have been a number of studies on liberalization programmes and their impact on efficiency in industrialized countries and transition economies. But there is lack of material particularly related to the prime determinants of profitability. Hence, there is a need to explore this area for research in detail as review of the literature on the subject indicated that the changes due to emerging competition are very vital for the present banking system. This paper is an attempt to study the profitability of Indian commercial banks in the post-liberalized and globalized era along with the analysis of its impact in terms of twelve selected factors of profitability.

OBJECTIVES

- To study and analyze the trends and growth in profitability and prime determinants of major bank groups.
- To analyze the impact of determinants on profitability of major bank groups.
- To suggest possible measures to improve the profitability of poor performing banks.

HYPOTHESIS

There is insignificant correlation between profitability and its determinants.

METHODOLOGY

The present paper is mainly concerned with profitability analysis of commercial banks in India.

RESEARCH DESIGN

The present study evaluates the profitability of Indian banking industry in the liberalized and globalized environment. Further, from among the Indian banking industry, only commercial banks have been chosen for the study whereas RRBs are excluded from the study.

SAMPLE DESIGN

The whole Indian banking industry is taken in terms of five major bank groups as given below:

- G-I comprises Nationalized Banks
- G-II comprises SBI & Associates
- G-III comprises Old Private Sector Banks
- G-IV comprises New Private Sector Banks
- G-V comprises Foreign Banks

PROFITABILITY ANALYSIS

The performance of a bank can be measured by a number of indicators. Profitability is the most important and reliable indicator as it gives a broad indication of the capability of a bank to increase its earnings. The analysis of profitability is made at bank group level. For measuring the profitability of commercial banks, the present study employs two methods viz., trend analysis and ratio analysis.

TREND ANALYSIS:

Trend indicates the direction of operations over a period of time. It also predicts the historical developments in the banks' operations. Trend analysis in this study is used to predict the trends in profitability and its prime determinants. Here, overall growth rate is also calculated with the help of following formula, which indicates the overall change in a factor under study during the whole study period.:

$$G = \frac{Y(t) - Y(t_0)}{Y(t_0)} * 100$$

Where;

G= simple percentage growth rate over the base year

Y (t) = value of the given parameter in the current year i.e. 2005-06

Y t_0= value of the given parameter in the base year i.e. 1998-99

RATIO ANALYSIS:

Ratio provides a convenient means of analysis and expression of the various operational aspects of banks. In this paper 13 ratios are calculated to analyze the profitability of commercial banks viz:

- Net Profit as a percentage of Total Assets (Y_1)
- Rural Branches as percentages of Total Branches (X_2)
- Priority Sector Advances as a percentage of Working Funds (X_3)
- Net *NPAs* as percentage of Net Advances (X_4)
- Interest Income as percentage of Total Income (X_5)
- Non- Interest Income as percentage of Total Income (X_6)
- Establishment Expenditure as a percentage of Total Expenditure (X_7)
- Spread as a percentage of Working Funds (X_8)
- Burden as a percentage of Working Funds (X_9)
- Current Deposits as a percentage of Total Deposits (X_{10})
- Fixed Deposits as a percentage of Total Deposits (X_{11})
- Saving Deposits as a percentage of Total Deposits (X_{12})
- Total Credit as a percentage of Total Deposits (X_{13})

Among these, profitability is dependent factor whereas other twelve factors are independent. In this study, it is analyzed whether the selected twelve factors have any factors contributing positively to profitability and which are the factors affecting profitability; if so then to what extent these factors affect the profitability of five major bank groups. This analysis provides an important result to examine the variables which impacts negatively, so that appropriate strategies can be developed in the light of this analysis.

TIME PERIOD FOR THE STUDY:

Time period for the study is taken from post second banking sector reforms i.e. from 1998-99 to 2005-06. The time period is taken so because the true impact of liberalization and globalization can be studied only after second banking sector reforms period as competition is increased, *IT Act, 2000* is implemented, free entry of foreign and private sector banks, implementation of *WTO*

with new facilities etc. These mixed factors which affect banking industry are studied in the selected time period.

COLLECTION OF DATA

The present paper is based on secondary data and it has been collected for the analysis of profitability from Performance Highlights, Various Issues, 1998-99 to 2005-06 *and IBA Bulletin, 1998-99, 2003-04.*

ANALYSIS OF THE DATA

These ratios are analyzed and interpreted by calculating Mean, Standard Deviation, Co-efficient of Variation to get a better picture of the performance of Indian commercial banks at group level. Besides this correlation co-efficient and R-square are also calculated to study the relationship between profitability and selected factors of profitability where r-square provides more useful information as it tells the extent of relationship between the factors under study.
Data is calculated with the help of SPSS 15.00 Version.

III

PROFITABILITY

Table 1 exhibits that all bank groups have shown fluctuating trend in their profitability during the study period and here, it is interesting to note that profitability was the highest in the year 2003-04 in all bank groups but further started to decline in the next years under study. All banks have recorded improvement in their profitability as foreign banks witnessed the highest growth i.e. 120.29 pc and also have the highest average profitability i.e. 1.27 pc. On the other hand, private sector banks have recorded the least rate of growth i.e. 39.68 pc where new private sector banks witnessed only 6.38 pc growth but have 0.93 pc average profitability which was the second highest among all bank groups. Interesting to note that all scheduled commercial banks have recorded 0.71 pc average profitability with an excellent rate of growth i.e. 423.53 pc Group-wise variations were the highest (46.05 pc) in old private sector banks.

Table 1: Net Profits/Loss as Percentage of Total Assets – Y_1 (At Bank Group Level)

(Per cent)

Sr. No.	Banks	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
1	G-I	0.37	0.44	0.33	0.69	0.98	1.19	0.89	0.81	0.71	0.31	43.66	118.92
2	G-II	0.51	0.80	0.55	0.77	0.91	1.02	0.91	0.86	0.79	0.18	22.78	68.63
3	PSBs (G-I +II)	0.42	0.57	0.42	0.72	0.96	1.12	0.89	0.83	0.74	0.26	35.14	97.62
4	G-III	0.47	0.78	0.68	1.04	1.17	1.16	0.20	0.54	0.76	0.35	46.05	14.89
5	G-IV	0.94	0.85	0.76	0.39	1.08	1.21	1.17	1.00	0.93	0.26	27.96	6.38

6	IPSBs (G-III+IV)	0.63	0.81	0.71	0.62	1.12	1.19	0.85	0.88	0.85	0.21	24.71	39.68
7	G-V	0.69	1.17	0.93	1.32	1.56	1.65	1.29	1.52	1.27	0.33	25.98	120.29
8	ASCBs	0.17	0.23	0.55	0.76	1.03	1.16	0.91	0.89	0.71	0.36	50.70	423.53
	Average	0.60	0.81	0.65	0.84	1.14	1.25	0.89	0.95				
	S.D.	0.22	0.26	0.23	0.35	0.25	0.24	0.42	0.36				
	C.V. (%)	36.67	32.10	35.38	41.67	21.93	19.20	47.19	37.89				

Year-wise, average profitability was the highest i.e. 1.25 pc in 2003-04 whereas it has decreased to 0.95 pc in 2005-06 mainly because of declining profitability of maximum old private sector banks and some of public sector banks. Variations were the highest in 2004-05 i.e. 47.19 pc in terms of C.V.

Overall, it is concluded that profitability of foreign banks has shown an excellent trend of improvement and average profitability was also the highest i.e. 1.27 pc in this group followed by new private sector banks who have 0.93 pc average profitability. Overall, profitability of all scheduled commercial banks has increased at 423.53 pc rate of growth which was improved from 0.17 pc in 1998-99 to 0.89 pc in 2005-06.

PRIME DETERMINANTS

From the analysis of profitability of major bank groups, it is concluded that profitability of Indian banking industry was deteriorating continuously. Now the question arises what are the factors that contribute to the improvement in profitability and mainly what are the factors responsible for deterioration in profitability of the banks? Here, an attempt has been made to estimate the impact of selected factors on bank profitability. Here, it is empirically tested that whether the correlation between profitability and selected factors is significant or not if so to what extent these factors affect the profitability. For this purpose, firstly selected factors are studied to examine the trends and growth during the period of 1998-99 to 2005-06 and then correlation analysis and regression analysis (R-square) are used to test the impact of these factors on the profitability of five major bank groups separately.

Rural Branches as Percentage of Total Branches (X_2):

Table 2 shows decreasing trend in their share of rural branches from total branches in all bank groups except new private sector banks Private sector banks have recorded the highest rate of decline i.e. 23.39 pc whereas foreign banks haven't any branch in rural areas of India. On an average, public sector banks have recorded the highest share of rural branches i.e. 41.53. New private sector banks have shown the highest variations i.e. 62.70 pc in terms of C.V. witnessed high competition among new private sector banks.

Overall, rural branches' share from total branches was decreasing at 9.46 pc rate during the study period and have only 39.74 pc average share in total branches of scheduled commercial banks.

Table 2: Rural Branches as Percentage of Total Branches – X_2

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	43.41	42.91	42.70	42.44	41.93	41.49	40.89	40.01	41.97	1.13	2.69	-7.83
G-II	41.69	41.14	40.67	40.52	40.44	40.07	39.82	39.35	40.46	0.74	1.83	-5.61
PSBs (G-I +II)	42.91	42.39	42.10	41.87	41.50	41.08	40.58	39.82	41.53	1.01	2.43	-7.20
G-III	34.21	33.51	29.68	29.19	25.43	27.89	26.62	26.75	29.16	3.22	11.04	-21.81
G-IV	1.74	2.39	12.92	10.22	7.42	8.47	7.70	18.45	8.66	5.43	62.70	960.34
IPSBs (G-III+IV)	31.72	30.47	26.93	25.66	21.33	23.79	22.03	24.30	25.78	3.75	14.55	-23.39
G-V	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASCBs	41.77	41.15	40.45	40.06	39.24	39.09	38.32	37.82	39.74	1.37	3.45	-9.46
Average	24.21	23.99	25.19	24.47	23.04	23.58	23.06	24.91				
S.D.	21.59	21.12	18.38	18.74	18.92	18.68	18.57	16.60				
C.V. (%)	89.18	88.04	72.97	76.58	82.12	79.22	80.53	66.64				

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

Priority Sector Advances as Percentage of Total Advances (X_3):

Table 3 shows that all bank groups except old private sector banks have recorded increasing trend in the share of priority sector advances from total advances. Among all, new private sector banks have recorded the highest growth i.e. 59.29 pc in its priority sector advances' share but has the least average share i.e. 20.28 pc. On an average, it was the highest in nationalized banks (34.03 pc) followed by old private sector banks. It was the least in new private sector banks even C.V. is the highest i.e. 25.20 pc that reflected higher competition in this bank group and resulted in the higher growth.

Table 3: Priority Sector Advances as Percentage of Total Advances- X_3

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	32.25	31.40	31.48	31.33	33.84	36.25	37.75	37.97	34.03	2.88	8.46	17.74
G-II	30.52	29.09	29.06	28.93	28.94	30.81	32.33	33.65	30.42	1.78	5.85	10.26
PSBs (G-I +II)	31.61	30.73	30.61	30.51	32.16	34.36	35.85	36.45	32.78	2.43	7.41	15.31
G-III	32.99	33.18	31.66	31.02	29.94	31.44	31.31	32.16	31.71	1.06	3.34	-2.52
G-IV	18.89	16.32	15.49	15.97	18.18	24.15	23.16	30.09	20.28	5.11	25.20	59.29
IPSBs (G-III+IV)	28.32	26.48	24.48	26.87	22.36	26.69	25.78	30.65	26.45	2.46	9.30	8.23
G-V	22.12	21.60	21.42	21.48	21.91	23.47	25.77	26.88	23.08	2.13	9.23	21.52

ASCBs	30.65	29.47	29.06	27.37	29.51	31.91	33.16	34.57	30.71	2.37	7.72	12.79
Average	27.35	26.32	25.82	25.75	26.56	29.22	30.06	32.15				
S.D.	6.42	7.12	7.12	6.76	6.36	5.38	5.74	4.13				
C.V. (%)	23.47	27.05	27.58	26.25	23.95	18.41	19.10	12.85				

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

Overall, all scheduled commercial banks have recorded 12.79 pc growth having 30.71 pc average share of priority sector advances in total advances during the study period. New private sector banks and foreign banks were gaining momentum with an excellent growth in priority sector advances and hence Public sector banks are facing challenges from these banks to retain their share in the market.

Net Non-Performing Assets (NPAs) as Percentage of Total Advances (X_4):

Table 4 exhibits that all bank groups have recorded declining trend in the non-performing assets level where foreign banks witnessed the highest decline at 86.78 pc and average non-performing assets of 3.60 pc which was the least among all bank groups under study. Nationalized banks followed with 86.54 pc decline but still have the highest level of non-performing assets i.e. 5.23 pc. New private sector banks have recorded the least decline of 78.51 pc.

Overall, all bank groups have succeeded to bring down their non-performing assets and public sector banks, although have the highest level of non-performing assets among all bank groups but still recorded a decline of big amount.

Table 4: Net NPAs as Percentage of Net Advances – X_4

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	8.69	8.08	7.56	6.60	4.74	3.13	1.86	1.17	5.23	2.93	56.02	-86.54
G-II	9.22	7.76	6.90	5.12	4.12	2.71	2.24	1.64	4.96	2.78	56.05	-82.21
PSBs (G-I +II)	8.96	7.92	7.36	6.16	4.50	3.00	1.99	1.33	5.15	2.87	55.73	-85.16
G-III	9.13	8.10	8.46	9.22	5.50	3.80	2.84	1.71	6.09	3.02	49.59	-81.27
G-IV	3.49	2.60	3.20	4.44	4.60	2.40	1.41	0.75	2.86	1.36	47.55	-78.51
IPSBs (G-III+IV)	6.31	5.35	7.06	7.95	4.95	2.84	1.87	1.01	4.67	2.52	53.96	-83.99
G-V	6.28	7.42	8.40	1.73	1.76	1.49	0.86	0.83	3.60	3.19	88.61	-86.78
ASCBs	7.18	6.90	7.20	9.34	4.40	2.90	1.89	1.23	5.13	2.94	57.31	-82.87
Average	7.36	6.79	6.90	5.42	4.14	2.71	1.84	1.22				
S.D.	2.48	2.36	2.17	2.76	1.42	0.86	0.76	0.44				
C.V. (%)	33.70	34.76	31.45	50.92	34.30	31.73	41.30	36.07				

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

Interest Income as Percentage of Total Income (X_5):

Table 5 shows declining trend in interest income of all bank groups till 2003-04 and then started to increase where foreign banks recorded the highest decline at 12.94 pc rate followed by new private sector banks with 11.37 pc which was mainly because these banks concentrated more on fee-based income. Public sector banks have shown 2.65 pc decline even having the highest average interest income i.e. 85.18 pc during the study period whereas it was the least in foreign banks group i.e. 74.81 pc. Overall, all scheduled commercial banks have recorded 4.73 pc decline in interest income.

Overall trend was declining, which is obvious in globalized environment as more concentration is diverted towards fee-based activities which give handsome income to the banks

Table 5: Interest Income as Percentage of Total Income – X_5

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	89.48	88.38	88.85	85.50	83.32	79.97	83.94	87.15	85.82	3.27	3.81	-2.60
G-II	85.61	85.81	86.74	86.56	83.63	78.93	82.29	83.38	84.12	2.64	3.14	-2.60
PSBs (G-I +II)	88.04	87.41	88.05	85.90	83.44	79.57	83.31	85.71	85.18	2.93	3.44	-2.65
G-III	88.15	85.05	88.64	79.65	79.07	78.99	87.72	87.92	84.40	4.41	5.23	-0.26
G-IV	85.57	81.91	85.86	79.40	75.94	75.94	76.74	75.84	79.65	4.30	5.40	-11.37
IPSBs (G-III+IV)	87.27	83.85	87.37	79.58	77.05	77.04	80.46	79.15	81.47	4.20	5.16	-9.30
G-V	80.61	79.16	79.04	74.54	74.49	70.09	70.36	70.18	74.81	4.38	5.85	-12.94
ASCBs	87.25	86.25	87.15	84.07	81.66	78.53	81.91	83.12	83.74	3.06	3.65	-4.73
Average	85.88	84.06	85.83	81.13	79.29	76.78	80.21	80.89				
S.D.	3.39	3.58	4.00	4.93	4.16	4.04	6.78	7.67				
C.V. (%)	3.95	4.26	4.66	6.08	5.25	5.26	8.45	9.48				

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

Non-Interest Income as Percentage of Total Income (X_6):

Non-interest income is very important source of income that contributes maximum in banks' income and gaining momentum share in total income.

Table 6: Non-Interest Income as Percentage of Total Income – X_6

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	10.52	11.62	11.15	14.50	16.68	20.03	16.06	12.85	14.18	3.27	23.06	22.15
G-II	14.39	14.19	13.26	13.44	16.37	21.07	17.71	16.63	15.88	2.64	16.62	15.57
PSBs (G-I +II)	11.96	12.59	11.95	14.10	16.56	20.43	16.69	14.29	14.82	2.93	19.77	19.48

G-III	11.85	14.95	11.36	20.35	20.93	21.01	12.28	12.08	15.60	4.41	28.27	1.94
G-IV	14.43	18.09	14.14	20.60	69.56	24.06	23.26	24.16	26.04	18.04	69.28	67.43
IPSBs (G-III+IV)	12.73	16.15	12.63	20.42	52.35	22.96	19.54	20.85	22.04	12.76	57.89	63.79
G-V	19.39	20.84	20.96	25.46	25.50	29.91	29.64	29.82	25.19	4.38	17.39	53.79
ASCBs	12.75	13.75	12.85	15.93	18.34	21.47	18.09	16.88	16.26	3.06	18.82	32.39
Average	14.12	15.94	14.17	18.87	29.81	23.22	19.79	19.11				
S.D.	3.39	3.58	4.00	4.93	22.53	4.04	6.78	7.66				
C.V. (%)	24.01	22.46	28.23	26.13	75.58	17.40	34.26	40.08				

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

From table 6, it is observed that all bank groups have shown fluctuating trend in non-interest income and recorded increase during the study period. Here, new private sector banks have recorded the highest growth i.e. 67.43 pc among all bank groups witnessed the highest average level of non-interest income i.e. 26.04 pc followed by foreign banks with 53.79 pc growth and 25.19 pc average non-interest income level. Growth was the least in old private sector banks i.e. only 1.94 pc and average non-interest income level was the least i.e. 14.82 pc in public sector banks.

Establishment Expenditure as Percentage of Total Expenditures (X_7):

Table 7 shows fluctuating trend in establishment expenditure of all bank groups. The share of establishment expenditure from total expenditure was increasing in new private sector banks group at the highest i.e. 167.65 pc growth rate with the highest variations (38.40 pc) and the least average establishment expenditure (5.13 pc). Foreign banks followed with 60.37 pc growth and have shown 10.51 pc average establishment expenditure. Whereas, public sector banks have shown 0.15 pc decline and have the highest average establishment expenditure i.e. 19.36 pc among all the bank groups although they were trying to bring down establishment expenditure.

Overall, all scheduled commercial banks have shown 1.37 pc decline and have 16.94 pc average share of establishment expenditure in total expenditure.

Table 7: Establishment Expenditure as Percentage of Total Expenditure – X_7

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	19.59	19.22	21.19	18.21	18.19	18.75	20.46	19.26	19.36	1.05	5.42	-1.68
G-II	19.70	18.91	21.08	16.36	16.72	18.05	18.83	20.14	18.72	1.63	8.71	2.23
PSBs (G-I +II)	19.63	19.07	21.15	17.51	17.63	18.52	19.87	19.60	19.12	1.22	6.38	-0.15
G-III	12.97	13.34	12.10	11.85	12.91	13.79	14.21	15.90	13.38	1.29	9.64	22.59
G-IV	3.06	3.37	3.64	4.74	4.39	5.87	7.79	8.19	5.13	1.97	38.40	167.65
IPSBs (G-III+IV)	9.71	9.61	8.31	8.44	7.35	8.68	10.17	10.41	9.09	1.05	11.55	7.21

G-V	8.58	9.28	8.95	9.79	10.15	11.20	12.35	13.76	10.51	1.80	17.13	60.37
ASCBs	17.54	17.13	18.52	15.63	15.23	16.50	17.69	17.30	16.94	1.10	6.49	-1.37
Average	12.78	12.82	13.39	12.19	12.47	13.53	14.73	15.45				
S.D.	7.18	6.71	7.69	5.36	5.51	5.29	5.09	4.80				
C.V. (%)	56.18	52.34	57.43	43.97	44.19	39.10	34.56	31.07				

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

Spread as Percentage of Total Assets (X_8):

Table 8 shows fluctuating trend in spread ratio of all bank groups. Old private sector banks have the highest growth in spread level i.e. 34.31 pc as overall private sector banks witnessed the highest growth of 15.58 pc in spread level whereas the growth was the least in foreign banks i.e. 9.32 pc but having the highest level of average spread i.e. 3.48 pc. Variations were the highest in new private sector banks i.e. 17.37 pc as these banks were highly competitive even then this group has the least average spread level (1.90 pc). Nationalized banks have recorded 9.47 pc growth with 2.86 pc average spread during the study period whereas it was the least in new private sector banks i.e. 1.90 pc only.

Table 8: Spread as Percentage of Total Assets – X_8

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	2.64	2.66	2.90	2.74	3.00	3.06	3.02	2.89	2.86	0.16	5.59	9.47
G-II	2.73	2.76	2.79	2.71	2.77	2.83	3.06	3.08	2.84	0.15	5.28	12.82
PSBs (G-I +II)	2.67	2.70	2.86	2.73	2.91	2.98	3.04	2.96	2.86	0.14	4.90	10.86
G-III	2.04	2.33	2.51	2.33	2.45	2.56	2.66	2.74	2.45	0.22	8.98	34.31
G-IV	1.91	1.95	2.14	1.18	1.70	1.98	2.18	2.15	1.90	0.33	17.37	12.57
IPSBs (G-III+IV)	1.99	2.16	2.33	2.19	1.97	2.18	2.33	2.30	2.18	0.14	6.42	15.58
G-V	3.22	3.92	3.63	3.22	3.36	3.60	3.34	3.52	3.48	0.24	6.90	9.32
ASCBs	2.65	2.73	2.85	2.57	2.78	2.89	2.93	2.86	2.78	0.12	4.32	7.92
Average	2.51	2.72	2.79	2.44	2.66	2.81	2.85	2.88				
S.D.	0.54	0.74	0.55	0.77	0.63	0.60	0.45	0.50				
C.V. (%)	21.51	27.21	19.71	31.56	23.68	21.35	15.79	17.36				

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

Burden as Percentage of Total Assets (X_9):

Table 9 shows fluctuating trend in burden of all bank groups during the study period. Burden as percentage of total assets has increased in case of private sector banks while public sector banks and foreign banks succeeded to bring down the level of burden. Like spread, burden was also grown at the highest rate i.e. 40.13 pc in case of old private sector banks that reflected their poor

performance as increasing burden contributed to decrease in profitability. It is interesting to note that burden has increased at 27.47 pc rate in new private sector banks also but even recorded the lowest level of average burden i.e. 1.03 pc that has shown this group was maintaining balance between its non-interest income and expenditure. Public sector banks have shown 7.05 pc decline even recorded the highest level of average burden i.e. 2.08 pc. Overall, it has increased from 1.85 pc to 1.93 pc during the study period as all scheduled commercial banks witnessed 9.68 pc decline in burden.

Overall, average burden level was still high in public sector banks but still they are trying to bring down their burden by 10.04 pc but private sector banks have shown increase mainly contributed by old private sector banks with 40.13 pc growth, reflected its poor performance.

Table 9: Burden as Percentage of Total Assets – X_9

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	2.29	2.12	2.43	1.97	2.01	1.88	2.11	2.06	2.11	0.18	8.53	-10.04
G-II	2.24	1.93	2.18	1.88	1.85	1.81	2.16	2.22	2.03	0.18	8.87	-0.89
PSBs (G-I +II)	2.27	2.05	2.33	1.93	1.95	1.85	2.13	2.11	2.08	0.17	8.17	-7.05
G-III	1.57	1.42	1.81	1.25	1.29	1.40	2.46	2.20	1.68	0.45	26.79	40.13
G-IV	0.91	0.93	1.25	0.72	0.80	1.42	1.01	1.16	1.03	0.24	23.30	27.47
IPSBs (G-III+IV)	1.33	1.20	1.53	0.91	0.98	1.41	1.48	1.43	1.28	0.23	17.97	7.52
G-V	2.24	2.38	2.40	1.75	1.77	1.99	2.05	1.99	2.07	0.25	12.08	-11.16
ASCBs	2.17	1.97	2.24	1.74	1.77	1.78	2.00	1.96	1.95	0.19	9.74	-9.68
Average	1.85	1.76	2.01	1.51	1.54	1.70	1.96	1.93				
S.D.	0.60	0.58	0.49	0.52	0.49	0.27	0.55	0.44				
C.V. (%)	32.43	32.95	24.38	34.44	31.82	15.88	28.06	22.80				

Current Deposits as Percentage of Total Deposits (X_{10}):

Table 10 shows the decreasing trend in a share of current deposits from total deposits in all bank groups except new private sector banks and foreign banks till 2004-05 and then recorded increase but in case of new private sector banks, it has decreased in 2005-06 whereas in case of foreign banks, it has shown increasing trend through out all the years under study. It is observed that average share of current deposits in total deposits was the highest i.e. 24.36 pc in foreign banks and recorded an excellent growth of 72.69 pc. Similarly, private sector banks have shown increase in current deposits' share whereas all public sector banks and overall scheduled commercial banks recorded decrease. Average share of current deposits was the highest in foreign banks i.e. 24.36 pc followed by SBI Group with 15.74 pc average share whereas it was the least in old private sector banks i.e. 10.54 pc. Overall, average current deposits share has increased from 15.16 pc in 1998-99 to 16.97 pc in 2005-06 and variations were also the highest in 2005-06 i.e. 58.04 pc in terms of C.V.

Table 10: Current Deposits as Percentage of Total Deposits – X_{10}

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	12.00	11.86	11.09	10.65	10.21	9.78	9.63	10.13	10.67	0.91	8.53	-15.58
G-II	17.89	17.72	16.18	15.17	14.48	14.62	14.09	15.74	15.74	1.45	9.21	-12.02
PSBs (G-I +II)	14.03	13.90	12.94	12.29	11.76	11.49	11.22	12.04	12.46	1.07	8.59	-14.18
G-III	11.93	13.17	10.37	10.09	9.31	9.23	9.80	10.40	10.54	1.36	12.90	-12.82
G-IV	14.28	17.15	14.34	13.81	12.75	18.25	17.52	14.58	15.34	2.01	13.10	2.10
IPSBs (G-III+IV)	12.75	14.87	12.21	12.04	11.23	14.32	14.51	13.29	13.15	1.32	10.04	4.24
G-V	19.70	21.67	20.08	21.10	20.89	27.23	30.18	34.02	24.36	5.42	22.25	72.69
ASCBs	14.24	14.44	13.25	12.73	12.14	12.75	12.68	13.46	13.21	0.80	6.06	-5.48
Average	15.16	16.31	14.41	14.16	13.53	15.82	16.24	16.97				
S.D.	3.51	3.91	3.96	4.42	4.60	7.37	8.45	9.85				
C.V. (%)	23.15	23.97	27.48	31.21	34.00	46.59	52.03	58.04				

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

Overall, all scheduled commercial banks have shown 13.21 pc average share of current deposits but recorded decline of 5.48 pc which was mainly due to the highest decline in current deposits of foreign banks and public sector banks. There should be more efforts to attract more current deposits because it contributes healthy share in earnings of the banks with negligible cost.

Fixed Deposits as Percentage of Total Deposits (X_{11}):

Table 11 shows declining trend in share of fixed deposits of all bank groups. Foreign banks have recorded the highest decline i.e. 31.79 pc in its share of fixed deposits' share and witnessed 62.98 pc average fixed deposits. Nationalized banks have recorded the least decline i.e. 4.16 pc as overall public sector banks witnessed 5.22 pc decline in its fixed deposits' share in total deposits. Average share of fixed deposits was the highest in old private sector banks i.e. 75.54 pc whereas it was the least i.e. 61.43 pc in SBI Group. Overall, fixed deposits share in total deposits was the highest in private sector banks and foreign banks recorded decline in fixed deposits at the highest rate i.e. 31.79 pc. Overall, average share of fixed deposits has decreased from 71.90 pc to 61.57 pc during the study period whereas variations were the highest in 2005-06 i.e. 14.52 pc.

Table 11: Fixed Deposits as Percentage of Total Deposits – X_{11}

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	64.24	64.05	64.60	64.54	63.78	63.24	62.93	61.57	63.62	1.02	1.60	-4.16
G-II	61.17	60.74	63.36	63.49	63.03	60.85	62.21	56.60	61.43	2.25	3.66	-7.47
PSBs (G-I +II)	63.18	62.90	64.15	64.16	63.51	62.40	62.67	59.88	62.86	1.36	2.16	-5.22

G-III	80.56	78.87	75.77	75.21	75.73	74.90	71.97	71.29	75.54	3.11	4.12	-11.51
G-IV	80.99	76.40	76.39	76.87	76.46	67.27	68.86	68.93	74.02	4.96	6.70	-14.89
IPSBs (G-III+IV)	80.71	77.81	76.05	76.08	76.14	70.60	70.07	69.66	74.64	4.06	5.44	-13.69
G-V	72.53	68.84	70.42	67.52	66.14	56.90	52.01	49.47	62.98	8.87	14.08	-31.79
ASCBs	65.58	65.04	66.03	66.02	65.57	63.44	63.43	61.28	64.55	1.68	2.60	-6.56
Average	71.90	69.78	70.11	69.53	69.03	64.63	63.60	61.57				
S.D.	9.11	7.78	6.07	6.16	6.56	6.86	7.66	8.94				
C.V. (%)	12.67	11.15	8.66	8.86	9.50	10.61	12.04	14.52				

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

Overall, fixed deposits' share was 64.55 pc in all scheduled commercial banks but recorded decline of 6.56 pc. The banks should mobilize fixed deposits at large from the public with some attractive and customer friendly benefits.

Saving Deposits as Percentage of Total Deposits (X_{12}):

Table 12 shows increasing trend in saving deposits' share from total deposits of all bank groups except, foreign banks witnessed decline in 2005-06. Share of saving deposits of new private sector banks reflected an excellent growth i.e. 248.63 pc along with the highest variations i.e. 39.71 pc but the average share of saving deposits was the least (10.93 pc) in this bank group. Foreign banks were following with 98.92 pc growth Overall, average saving deposits have increased from 14.51 pc in 1998-99 to 21.45 pc in 2005-06 but variations were the highest in 1998-99 i.e. 55.69 pc. All scheduled commercial banks recorded 21.97 pc growth in its share of saving deposits whereas average saving deposits were 22.43 pc.

Overall, share of saving deposits was the highest in public sector banks but growth was recorded the highest in new private sector banks i.e. 248.63 pc. Hence, new private sector banks were gaining momentum in saving deposits share with attractive and competitive marketing strategies.

Table 12: Saving Deposits as Percentage of Total Deposits – X_{12}

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	23.76	24.10	24.31	24.81	26.05	26.98	27.37	28.29	25.71	1.70	6.61	19.07
G-II	20.94	21.54	20.46	21.33	22.48	24.53	24.96	27.66	22.99	2.50	10.87	32.09
PSBs (G-I +II)	22.79	23.21	22.91	23.55	24.76	26.11	26.51	28.08	24.74	1.97	7.96	23.21
G-III	14.83	15.22	13.86	14.70	14.96	15.87	16.60	18.30	15.54	1.38	8.88	23.40
G-IV	4.73	6.46	9.27	9.32	10.79	14.48	15.89	16.49	10.93	4.34	39.71	248.63
IPSBs (G-III+IV)	11.31	11.47	11.73	11.87	12.63	15.08	16.17	17.05	13.41	2.32	17.30	50.75
G-V	8.30	9.83	9.50	11.38	12.97	15.87	17.95	16.51	12.79	3.62	28.30	98.92
ASCBs	20.71	21.05	20.72	21.25	22.30	23.81	24.34	25.26	22.43	1.80	8.02	21.97

Average	14.51	15.43	15.48	16.31	17.45	19.55	20.55	21.45
S.D.	8.08	7.49	6.70	6.58	6.52	5.76	5.24	6.01
C.V. (%)	55.69	48.54	43.28	40.34	37.36	29.46	25.50	28.02

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

Total Credit as Percentage of Total Deposits (X_{13}):

Table 13 shows increasing trend in share of credits from total deposits of public sector banks while it was fluctuating in private and foreign banks. Overall, C-D ratio has improved in all the bank groups during the study period.

Table 13: Total Credit as Percentage of Total Deposits (C-D Ratio) – X_{13}

(Per cent)

Bank Group	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)	Overall Growth
G-I	44.95	46.74	48.34	51.10	52.32	51.92	57.32	64.69	52.17	6.33	12.13	43.92
G-II	49.44	50.43	48.18	46.87	48.39	50.94	56.31	68.49	52.38	7.11	13.57	38.53
PSBs (G-I+II)	46.50	47.76	48.28	49.57	50.89	51.46	56.90	65.98	52.17	6.42	12.31	41.89
G-III	49.66	50.14	51.87	49.97	54.07	52.83	58.21	63.82	53.82	4.92	9.14	28.51
G-IV	49.38	47.46	47.96	61.93	77.34	70.97	78.39	77.37	63.85	13.94	21.83	56.68
IPSBs (G-III+IV)	49.57	49.04	50.06	53.27	67.07	63.55	70.53	73.19	59.54	10.13	17.01	47.65
G-V	63.07	72.21	72.67	75.39	75.27	75.59	87.18	85.77	75.89	7.69	10.13	35.99
ASCBs	47.83	49.50	49.88	53.69	54.55	54.71	60.66	68.47	54.91	6.80	12.38	43.15
Average	51.30	53.40	53.80	57.05	61.48	60.45	67.48	72.03				
S.D.	6.87	10.64	10.67	11.72	13.71	11.84	14.33	9.37				
C.V. (%)	13.39	19.93	19.83	20.54	22.30	19.59	21.24	13.01				

Source: Performance Highlights, Various Issues, 1998-99 to 2005-06

The growth in C-D ratio was the highest (56.68 pc) in new private sector banks and nationalized banks followed with 43.92 pc growth rate but witnessed the least average C-D ratio i.e. 52.17 pc among all bank groups, whereas old private sector banks witnessed the least growth rate i.e. 28.51 pc. Average C-D ratio was the highest i.e. 75.89 pc in foreign banks. All scheduled commercial banks with 54.91 pc average C-D ratio recorded 43.15 pc growth. The level of credits in deposits was improving in all bank groups as all bank groups have their credit level above 50 pc of their deposits where new private sector banks were putting much efforts and gained momentum share in credit market as foreign banks also have an excellent amount of C-D ratio i.e. 75.89 pc, a sign of their proper credit disbursement policy.

Overall, it is concluded that new private sector banks and foreign banks have better performance in most of the selected factors as spread, profitability, cost, deposits, C-D ratio etc but public sector banks although following these bank groups with improved profitability, priority sector advances, decreasing non-performing assets but still witnessing overall decline in their performance in terms of continues deterioration in profitability.

CORRELATION CO-EFFICIENT AMONG PROFITABILITY AND ITS DETERMINANTS

From the ongoing analysis, it is observed that a majority of the banks have recorded continuous deterioration in their profitability. There are some factors which affect the profitability at large. Hence, there is a need to examine the factors that affect the profitability positively and negatively. 12 prime determinants, studied in the last part, have their impact on profitability either positively or negatively. Here an attempt is made to study the correlation between profitability and these determinants separately so that it is possible to identify factors contributing to profitability or decline.

G-I (Nationalized Banks):

Table 14 shows the co-efficient correlation between profitability of nationalized banks and its selected 12 determinants. Profitability has significant and positive correlation with X_6 (non-interest income as percentage of total income) at 1 pc significant level, X_8 (spread as percentage of total assets) and X_{12} (saving deposits as percentage of total deposits) at 5 pc significant level that means increase in saving deposits, non-interest income and spread lead to increase in profitability. Correlation was significant but negative between profitability and X_4 (net non-performing assets as percentage of net advances) at 5 pc significant level, X_5 (interest income as percentage of total income), X_9 (burden as percentage of total assets) and X_{10} (current deposits as percentage of total deposits) at 1 pc level of significance that means increase in these factors lead decrease in profitability. In case of other factors, it was insignificant.

From this table, it also emerges that few independent variables also have significant correlation with other independent variables. X_2 (rural branches as percentage of total branches) have significant correlation with number of variables like X_3, X_4, X_{10}, X_{11}, X_{12} & X_{13} at 1 pc significant level except X_{10} which was significant at 5 pc level and among these X_{12} (saving deposits as percentage of total deposits) has the highest (-0.982) correlation. Similarly, X_3 has significant correlation with X_4, X_{10}, X_{11} & X_{13} where X_4 (net non-performing assets as percentage of net advances) has the highest correlation (-0.955) that means non-performing assets have the highest impact on priority sector advances. In the same way, X_{13} has significant correlation with X_2, X_3, X_4, X_{11} and X_{12} at 1 pc level and X_{10} at 5 pc significant level, where X_2 (rural branches as percentage of total branches) has high correlation (-0.973).

Hypothesis Testing:

It is evident from table 14 that hypothesis (profitability has insignificant correlation with its selected factors/variables) was rejected as it has significant correlation with X_4, X_5, X_6, X_8, X_9, X_{10} and X_{12}.

G-II (SBI Group):

Table 15 exhibits that profitability of G-II is significantly and positively correlated with only X_6 (non-interest income as percentage of total income) at 5 pc significant level whereas significantly but negatively correlated with X_4, X_5 and X_{10} at 5 pc significant level where correlation with X_4 (net non-performing assets to net advances) was the highest (-0.806). It has positive but insignificant correlation with X_3, X_8, X_{12} and X_{13} whereas insignificant and negative correlation with X_2, X_7 & X_9. It is observed that profitability of SBI group was affected negatively by number of variables where non-performing assets were affecting the profitability at the highest that contributed to increase in profitability.

Among the independent variables X_2 has significant correlation with X_4, X_8, X_{10} and X_{12} where X_4 (net non-performing assets as percentage of net advances) has the highest correlation (-0.967). Similarly, X_3 has significant correlation with X_8, X_{11}, X_{12} and X_{13} and among these, X_{13} (credit to deposits ratio) has the highest correlation i.e. 0.914. In the same way, X_2, X_3, X_4, X_8 and X_{11} have significant correlation with X_{12} (saving deposits as percentage of total deposits) and X_3 (priority sector advances as percentage of total advances) have shown the highest and positive correlation i.e. 0.892.

Hypothesis Testing:

Table 15 shows that hypothesis regarding the correlation between profitability and selected variables were rejected in some cases as profitability has significant correlation with X_4, X_5, X_6 and X_{10} while it has been accepted in case of correlation with other variables because correlation is insignificant.

G-III (Old private sector banks):

Table 16 shows that profitability of old private sector banks was significantly and positively correlated with only one variable i.e. X_6 (non-interest income as percentage of total income) i.e. 0.899 at 1 pc level of significance whereas it has significant but negative correlation with X_5 (-0.899) and X_9 (-0.848) at 1 pc significant level. It is insignificantly in case of other factors that means profitability of old private sector banks was deteriorating because of negative effect of most of the variables like spread, current deposits, saving deposits and credits.

Among the independent variables, X_2 has significant correlation with X_3, X_4, X_8, X_{10} and X_{11} where X_{10} (current deposits as percentage of total deposits) has the highest and positive correlation. Similarly, X_4 has significant correlation with X_7, X_8, X_{11}, X_{12} and X_{13} at 1 pc significant level as X_{13} (credit to deposit ratio) witnessed the highest and negative correlation

(-0.889). In the same way X_{13} has significant correlation with X_4, X_7, X_8, X_9, X_{11} and X_{12} and X_{12} (saving deposits to total deposits) has the highest and positive correlation i.e. 0.892.

Hypothesis Testing:

Table 16 exhibits that hypothesis regarding the correlation between profitability and selected variables has been rejected in case of correlation between profitability and X_5, X_6 and X_9 as have significant correlation while it was accepted in case of correlation with other variables because correlation is insignificant.

G-IV (New private sector banks):

Table 17 shows that profitability of new private sector banks have not significant correlation even with a single variable but still most of the variables are positively correlated with profitability such as X_3, X_6, X_7, X_8, X_9, X_{10}, X_{12} and X_{13} whereas others have negative correlation that means profitability of new private sector banks was not significantly correlated with any of the selected variables.

Among the independent variables, X_3 (priority sector advances to total advances) has a significant correlation with X_4, X_7, X_{11} and X_{12} at 5 pc level of significant where X_7 (establishment expenditure to total expenditure) has the highest and positive correlation i.e. 0.860. X_5 (interest income to total income) has significant correlation with X_7, X_{11}, X_{12} and X_{13} whereas X_{13} has the highest correlation (-0.933). Similarly, X_{11}, X_{12} & X_{13} have significant correlation with number of some other independent variables.

Hypothesis Testing:

From table 17 it is clear that hypothesis for insignificant correlation between profitability and selected variables, has been accepted because it has insignificant correlation with the selected variables.

G-V (Foreign banks):

Table 18 shows that profitability of foreign banks is significantly and positively correlated with X_6 (non-interest income as percentage of total income), X_{12} (saving deposits as percentage of total deposits) at 5 pc level of significant whereas it was significantly but negatively correlated with X_4 (net non-performing assets as percentage of net advances) and X_5 (interest income as percentage of total income) at 5 pc significant level. It was insignificantly correlated with the remaining variable where X_3, X_7, X_8, X_{10} and X_{13} have positive correlation.

Among independent variables, except X_8 & X_9 all other variables have significant correlation at 1 pc significant level with number of other independent variables where X_3 has significant correlation with X_5, X_6, X_7, X_{10}, X_{11}, X_{12} and X_{13} and X_{10} (current deposits to total deposits) has the highest and positive correlation (0.972). X_4 has significant correlation with X_5, X_6, X_7, X_9, X_{11} and X_{12} and X_5 and X_6 has the highest correlation i.e. 0.905 and -0.905 respectively.

***Hypothesis Testing*:**

Table 18 exhibits that hypothesis has been rejected only in case of correlation between profitability and X_4, X_5, X_6 and X_{12} as have significant correlation while it was accepted in case of correlation with other variables.

Overall, profitability of foreign banks was highly affected by X_4, X_5, X_6 and X_{12} while other variables have little bit importance in profitability.

REGRESSION ANALYSIS

As correlation analysis shows only positive and negative effect of different variables on profitability but doesn't tell to what extent a particular variable can affect the profitability. Regression analysis helps in this context where R-square is calculated to estimate the extent of impact of independent variables on dependent variable. Table 19 shows that profitability of G-I is highly affected by X_5 (interest income to total income) and X_6 (non-interest income to total income) as X_5 has negative impact of 90 pc and X_6 has positive impact of 90 pc that means with the change of one unit of these variables, profitability will be changed by 90 pc. X_7 (establishment expenditure as percentage of total expenditure) has the least effect but negative as R-square is only 0.246.

In case of SBI group, X_4 (net non-performing assets as percentage of net advances) has the highest effect on its profitability but negative as reflected 0.656 value of R-square whereas X_{11} (fixed deposits to total deposits) was affecting the profitability negatively at the lowest rate i.e. only 5 pc.

Profitability of old private sector banks was highly effected by X_5 (interest income to total income) and X_6 (non-interest income to total income) having 81 pc effect in terms of R-square value (0.808) as X_5 was affecting the profitability negatively and X_6 was affecting it positively. X_8 (spread as percentage of total assets) has the least effect but negative that was only 1 pc.

Profitability of new private sector banks was highly and negatively affected by X_3 (priority sector advances to total advance) but still low that was 0.348 in terms of R-square

whereas it was affected by X_2 (rural branches as percentage of total branches) at the lowest rate i.e. 0.008 that means the profitability of new private sector banks was not affected by these determinants at significant rate.

Profitability of foreign banks was highly but negatively affected by X_5 (interest income to total income) and X_6 (non-interest income to total income) having 0.694 value in terms of R-square as X_5 have negative and X_6 has positive affect on profitability whereas X_8 (Spread as percentage of total assets) has the least but positive effect on profitability.

Table 19: Regression Analysis

Variables	G-I		G-II		G-III		G-IV		G-V	
	r	R^2	r	R^2	r	R^2	r	R^2	r	R^2
X_2	-0.674	0.454	-0.689	0.475	-0.189	0.036	-0.091	0.008	-	-
X_3	0.702	0.493	0.306	0.094	-0.477	0.227	0.590	0.348	0.409	0.167
X_4	-0.786*	0.618	-0.806*	0.656	0.198	0.039	-0.497	0.247	-0.782*	0.612
X_5	-0.949**	0.901	-0.787*	0.619	-0.899**	0.808	-0.453	0.205	-0.833*	0.694
X_6	0.949**	0.901	0.787*	0.619	0.899**	0.808	0.319	0.102	0.832*	0.692
X_7	-0.496	0.246	-0.527	0.278	-0.398	0.158	0.419	0.176	0.662	0.438
X_8	0.783*	0.613	0.423	0.179	-0.109	0.012	0.687	0.472	0.110	0.012
X_9	-0.841**	0.707	-0.597	0.356	-0.848**	0.719	0.492	0.242	-0.686	0.471
X_{10}	-0.874**	0.764	-0.710*	0.504	-0.315	0.099	0.467	0.218	0.552	0.305
X_{11}	-0.536	0.287	-0.222	0.049	0.165	0.027	-0.564	0.318	-0.657	0.432
X_{12}	0.783*	0.613	0.658	0.433	-0.357	0.127	0.497	0.247	0.745*	0.555
X_{13}	0.543	0.295	0.305	0.093	-0.393	0.154	0.517	0.267	0.637	0.406

Source: Computed from Table No. 4.13 to 4.17
Note: **Correlation is Significant at 0.01 level (2-tailed)
*Correlation is Significant at 0.05 level (2-tailed)

Overall, profitability was highly affected by X_5, X_6 (nationalized banks, old private sector banks and foreign banks) and by X_4 (SBI Group) and X_3 (new private sector banks group) whereas spread and establishment expenditure have correlation with profitability but affected at the lowest rate. Important to note here is that the factors that affect the profitability at the highest have negative effect on it as interest income was one of them. Similarly, net non-performing assets also have negative correlation with profitability in almost all the banks and further contributed in profitability improvement. It reflected the efforts of the bank groups to bring down their non-performing assets level at the lowest. Other variables like establishment expenditure, burden etc. were affecting the profitability negatively and led to deterioration in profitability. Hence, it is concluded from these results that to have excellent profitability performance, banks need to have excellent performance in managing burden and establishment expenditure and to improve the level of their deposits along with best portfolio for investments.

From the foregoing analysis, it may be concluded that new private sector banks have gained momentum in rural branches' share and that of priority sector advances with the highest rate of increase although the average share was the highest in public sector banks. Foreign banks

have recorded the highest decline in non-performing assets, interest income and fixed deposits whereas the highest growth was witnessed in current deposits. But new private sector banks have the lowest level of non-performing assets (2.86 pc) and the highest level of non-interest income (26.04 pc) whereas the highest spread and total credits' share in total deposits was recorded by the foreign banks.

Overall, foreign banks and new private sector banks are gaining dominant positions with improved profitability more particularly due to the highest decline in non-performing assets although having large amount of establishment expenditure. These factors are affecting the profitability of all bank groups significantly where the most dominating factors are interest and non-interest income, non-performing assets and priority sector advances which affect the profitability at the highest rates.

IV

MAJOR ISSUES

- Less interest in fee-based activities by the public sector banks.
- High level of establishment expenditure in public sector banks.
- High level of burden in old private sector banks.
- Decreasing level of current deposits of public sector banks and old private sector banks.
- Decreasing fixed deposits of all bank groups except old private sector banks group.
- Deterioration in profitability of some commercial banks.

POLICY RECOMMENDATIONS

Although a lot of reforms have occurred in Indian banks, there is still a need to modify the policies of public sector banks and old private sector banks. At present, they are facing many internal and external challenges, which are hindering their performance, but these banks can convert the current challenges into opportunities with some modifications in accordance with the globalization and changes in the technology as financial markets, world over have become closely integrated. Customers can access their accounts anywhere anytime. Deregulation and liberalization has opened up new opportunities for banks but at the same time the pressure of competition has led to narrowing spreads, shrinking margins, consolidation and restructuring. In the wind of changes, sweeping across the world, the banks will need to be equipped to handle challanges. Therefore, some suggestions are given to improve the performance of such banks.

Cost Control:

Establishment expenditure which is the second largest item of the total expenditure of banks needs to be monitored regularly. High level of establishment expenditure in public sector banks is observed from the analysis. This is a major cause for reduction in their profitability; it is

mainly because of overstaffing and secondly their improper utilization. This expenditure may be reduced by putting proper control over manpower utilization. Human resources should be utilized properly to get optimum advantage because it is also possible to attain higher business volume with minimum staff, if utilized properly and thus establishment expenditure can be reduced and profitability can be improved for this purpose VRS should be introduced with some modifications.

Diversification of Services:

High level of burden has impacted the profitability of public sector banks and old private sector banks negatively. It is mainly because interest income and expenditure are decreasing continuously due to deregulation of interest rates whereas non-interest and expenditure is increasing because banks are now concentrating more towards fee based activities. But public sector banks and old private sector banks are split and dependent on deposits, advances and other interest bearing activities rather to opt for fee based activities. Hence, they have the highest level of burden and low level of spread. The banks should concentrate more towards diversification of their resources because there are a number of non-banking financial services such as consultancy services, merchant banking, ancillary services etc. which give handsome income to the banks. This is the only competitive strategy that new private sector banks and foreign banks are providing to the customers in innovative ways and facilitate them by providing every comfort money management, ticket reservation anywhere and anytime cash withdrawal, fee deposit and other bill payments etc; that is why they are now the leaders the bank market.

Deposit Mobilizations:

Current and fixed deposits are declining in the banks, which is not a sign of their sound liquidity. There is a need to explore the maximum potential for deposit with some attractive schemes and interest rates. Fixed deposits add to long term finance and make liquidity position sound; secondly, they contribute maximum to the profitability. Even new private sector banks and foreign banks have good share of fixed deposits while these are lower and decreasing in case of public sector banks and foreign banks. Hence, these banks need to put efforts to explore the maximum number of potentials.

Full Computerization:

New private sector banks and foreign banks are performing well with the help of advanced technologies and gaining a momentum in the market. Public sector banks should also require to be computerized their all branches and used latest technologies to serve the customers efficiently, it will help them to survive in the market with handsome income. For this purpose, they need technically experienced and learned staff. Therefore, they should provide training to the existing bank employees for bank technology, and then they can also hire some experts because technical

fault leads frustration which further motivates the people not to change. They should be prepared to adopt technologies in easy way.

***Development of Rural Branches*:**

Public sector banks have the highest number of branches in the rural areas of India, but they all are not performing well, not affecting the profitability at significant rate, but still require to be developed properly with some new and attractive services and by creating employee-friendly environment. Rural area is a major part of India, so it demands development by making the rural branches efficient either through merger/acquisition or by making the individual branches strong enough to give profits rather than losses. For this purpose, rural people should also be made aware about the banking services and their benefits.

Besides all these, public sector banks and old private sector banks or in other sense poor performing banks should make effective efforts for efficient risk management, stress management, knowledge management, customer relationship management, entry in fee-based activities at large scale, concentrate more on retail banking, merchant banking, e-banking services with latest technology etc. These banks should adopt corporate governance along with merger and acquisition of weak banks with some other banks so that they can be made competitive in the local as well as global market. They should make their own competitive strategies in the light of international standards to compete with their counterparts efficiently. Public sector banks are the major and important part of Indian banking industry; hence they need to improve with the help of RBI and government who in turn should free them from regulatory bindings.

FUTURE AGENDA

No study is complete in itself; so the following areas can be explored for further study in this area of research:

- Comprehensive study of comparative profitability behaviour of all individual banks in urban, semi-urban and rural areas.
- Comprehensive study for SWOT analysis for banks with poor performance in profitability.
- Feasibility and viability of e-banks in rural areas and semi-urban areas.
- In-depth study for profitability analysis of banks at branch level.
- Profitability behaviour of banks in the post-merger and acquisition era.

CONCLUSION

India is now Asia's third largest economy and has the world's fourth largest foreign exchange reserves. Technology, competition and benchmarking to the best international practices have to be the driving force of India's development efforts. The country is making rapid strides in all these areas. Technology is getting upgraded rapidly and competition in the market place has become fierce. The vibrant IT industry is contributing immensely by providing information about latest technology and international business practices. Hence, all banks should adopt the latest technology with customer friendly and innovative products and services to explore the global opportunities.

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